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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,874	09/16/2003	Kazuhiro Ichikawa	Q77437	1165

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EXAMINER

CHEN, SOPHIA S

ART UNIT PAPER NUMBER

2852

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,874

Applicant(s)

ICHIKAWA ET AL.

Examiner

Sophia S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,8,12 and 14 is/are rejected.
- 7) ☒ Claim(s) 2-4,6,9-11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: V1, V2, and V3 (Figure 7). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because of the following informalities:

a. Reference character "C" has been used to designate both "cyan" (page 7, line 23, etc. and Figures 4 and 5) and "a value representing a color image formation mode" (page 12, lines 4-5, etc. and Figures 4 and 5).

b. Reference character "M" has been used to designate both "magenta" (page 7, line 23 to page 8, line 1, etc. and Figures 4 and 5) and "a value representing a

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monochromatic image formation mode" (page 12, lines 11-12, etc. and Figures 4 and 5).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "---of the monochromatic image when the colors of toners filled in said multiple toner cartridges are all black" (claims 4 and 11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 7 and 14 are objected to because of the following informalities:
 - a. Claim 7, line 2, "the control parameter" should be "a control parameter" in order to have the proper antecedent basis.
 - b. Claim 14, line 2, "the control parameter" should be "a control parameter" in order to have the proper antecedent basis.
- Appropriate correction is required.

Claim Rejections – 35 U.S.C. §102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujimori (US Pat. No. 6,181,892 B1).

The patent discloses an image formation device and method that transfers toner images formed with toners of multiple colors onto a recording medium (a transfer sheet) 19 so as to form a color image (column 4, lines 4-9; column 5, lines 17-25; Figure 1), the image formation device or method comprising: a specification module (inherently; column 12, lines 7-9 and Figure 10, step S301) that specifies either formation of a composite color image or formation of a monochromatic image; a control module CPU that, when said specification module specifies formation of the composite color image, controls to selectively apply a color image adjustment operation for toner density adjustment that adjusts a toner density of each toner image formed, while controlling to selectively apply a monochromatic image adjustment operation for the toner density adjustment when the specification module specifies formation of the monochromatic image (column 12, lines 7-42 and Figures 10 and 11).

Claim Rejections – 35 U.S.C. §103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 5, 7, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimori in view of Nakazato et al. (US Pat. Pub. No. US 2002/0041770 A1).

Fujimori, as discussed above, further discloses the color image adjustment operation detects toner densities of multiple test toner images formed with multiple color toners (column 12, lines 12-21), the monochromatic image adjustment operation detects a toner density of a test toner image formed with black toner (column 12, lines 22-26), and the control module CPU outputs a tone supply signal for a toner supply unit supplies each toner to a developing device 30 so as to keep the toner density of the developer at a predetermined value (column 5, lines 62-67).

Fujimori differs from the instant claimed invention in not disclosing the toner density adjustment sets a control parameter for controlling toner image formation, based on the detected toner density; and the control parameter includes at least one of a

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charge potential of a photoreceptor, a light exposure of an exposure unit, a developing bias of a developer unit, and a charge potential of a transfer unit.

Nakazato et al. discloses an image formation device and method comprising a control unit 6 adjusts process conditions (control parameters) such as an electrifying bias and a developing bias and control an image density based on the quantity of toner adhering to the surface of an intermediate transfer belt 141 (paragraph [0053]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the process conditions (control parameters) as taught by Nakazato et al. to the control module CPU of Fujimori to create an image with a stable density (Nakazato et al., paragraph [0017]).

Allowable Subject Matter

10. Claims 2-4, 6, 9-11, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto et al. (US Pat. No. 6,192,207 B1) discloses an image forming apparatus comprising a full-color mode and a monochrome mode.

Ohki (US Pat. Pub. No. US 2001/0043258 A1) discloses an image forming apparatus comprising tonality control mechanism.

Matsunawa et al. (JP 02-144568 A) discloses an image forming apparatus comprising a monochromatic picture processing means, a color picture processing means, and a density adjustment circuit.

Kanamori (JP 2001-094810 A) discloses an image forming apparatus comprising a density adjustment mechanism.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
November 15, 2004